



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/987,317	11/15/2004	James W. Bohlig	105452.183US4	7384

24395 7590 12/21/2006
WILMER CUTLER PICKERING HALE AND DORR LLP
1875 PENNSYLVANIA AVE., NW
WASHINGTON, DC 20004

EXAMINER

GART, MATTHEW S

ART UNIT	PAPER NUMBER
----------	--------------

3625

SHORTENED STATUTORY PERIOD OF RESPONSE	NOTIFICATION DATE	DELIVERY MODE
3 MONTHS	12/21/2006	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Notice of this Office communication was sent electronically on the above-indicated "Notification Date" and has a shortened statutory period for reply of 3 MONTHS from 12/21/2006.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

teresa.carvalho@wilmerhale.com

Office Action Summary

Application No.

09/995,456

Applicant(s)

MCLAUGHLIN, RICHARD P.

Examiner

Dilek B. Cobanoglu

Art Unit

3626

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 September 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-44 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-44 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 2/25/2002
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

DETAILED ACTION

1. This communication is in response to the amendment received on 09/28/2006.

Claims 1-44 still remain pending.

Claim Rejections - 35 USC § 112

2. The following rejection of claims 30-44 under 35 U.S.C. § 112, 2nd paragraph, within the prior Office Action, is hereby maintained:

A. Claim 30 discloses "planning an orthodontic treatment based upon the crowding/spacing data entered into the first and second tables". It is not clear how the planning process occurs on the claim. Is the planning to figure out the distance and direction required to move each tooth, or only finding out the existing space between the teeth and the midline. Also, in the following claims, it's disclosed that summing the crowding/spacing data of the first and second tables and then summing these totals, so creating first and second initial discrepancies; entering other created space such as extractions, strippings, expansions and distalizing, then adding these values with the first and second totals to create first and second remaining discrepancies. It is not clear how and for what these discrepancies are used. It's not clear what the obtained values are for and how they are to be used. Are the discrepancies the distances from the midline and how is the distance from each tooth from the midline is calculated or obtained from summing these values is not clear.

Art Unit: 3626

B. Claims 31-44 are dependent to claim 30, and follows the same limitations, therefore they are rejected under 35 U.S.C. 112, second paragraph with the same reasons described above and incorporated herein.

C. Applicant's arguments with respect to the aforementioned rejection are addressed below in the section entitled "Response to Argument".

Claim Rejections - 35 USC § 101

3. The following rejection of claims 1-44 under 35 U.S.C. § 101, within the prior Office Action, is hereby maintained:

A. Claims 1, 14, 22 and 30 disclose entering crowding/spacing data, curve of spee data and incisor position data into first and second tables, and summing the first and second data and obtaining a first and second total. This is not a tangible and useful result. At the end of summing these data one can obtain a number for each table, and this is not a tangible and useful data for any treatment. Also, it's not clear what these numbers represent and how they are to be used.

B. Claims 2-13, 15-21 and 31-44 are dependent claims and disclose the same limitations, therefore they're rejected under 35 U.S.C. 101 with the same reasons as described above.

C. Applicant's arguments with respect to the aforementioned rejection are addressed below in the section entitled "Response to Argument".

Claim Rejections - 35 USC § 102

4. The rejection of claims 1-44 under 35 U.S.C. § 102 (b), within the prior Office Action, is hereby maintained. Applicant's arguments with respect to the aforementioned rejection are addressed below in the section entitled "Response to Argument".

Response to Arguments

5. Applicant's arguments filed 09/28/2006 have been fully considered but they are not persuasive. Applicant's arguments will be addressed below in the order in which they appear.

A. In response to Applicant's argument about rejection of claims 30-44 under 35 U.S.C. § 112, 2nd paragraph, Examiner respectfully submits that claim 30 recites "entering crowding/spacing data in a first table, wherein the crowding/spacing data entered into the first table relate to a cuspid to midline region of a patient's jaw; entering crowding/spacing data in a second table, wherein the crowding/spacing data entered into the second table relate to a second molar to midline region of the patient's jaw and include the crowding/spacing data related to the cuspid to midline region of the patient's jaw; and, planning an orthodontic treatment based upon the crowding/spacing data entered into the first and second tables", and "crowding/spacing data" is not clear. The claim states the first data is related to "a cuspid to midline region of a patient's jaw", the second data is related to "a second molar to midline region of the patient's jaw and include the crowding/spacing data related to the cuspid to midline region of the

patient's jaw". Examiner would like to submit that these data are unclear; is the data related to "cuspid to midline region" a distance or a coordinate and exactly from which point of the cuspid to which point of the midline (is it perpendicular to the tooth, or midpoint of the jaw). Also, the second data is related to "a second molar to midline region of the patient's jaw", this data is not clear either; is it a distance or a coordinate and exactly from which point of the second molar to which point of the midline. Therefore the discrepancies obtained by adding these data in the first and second tables are not clear. It is not clear how the planning process occurs in the claim 30. Is the planning to figure out the distance and direction required to move each tooth, or only finding out the existing space between the teeth and the midline, and which points of the teeth and midline.

B. In response to Applicant's argument about rejection of claims 1-44 under 35 U.S.C. § 101, because these claims do not produce tangible and useful results, Examiner respectfully submits that claims 1, 14, 22 and 30 disclose "entering crowding/spacing data, curve of spee spacing data, midline spacing data and incisor position data into first and second tables, and summing the first and second data and obtaining a first and second total".

Analysis for determining patent eligible subject matter under §101 is a four-step process:

- i. First, the claimed invention should fall within one of the four statutory categories. The four statutory categories are a process, a machine, a manufacture or a composition of matter.

ii. Second, the claimed invention should fall within a judicial exception. The Supreme Court has specifically identified three categories of nonstatutory subject matter as: laws of nature, natural phenomena and abstract idea. Applicant argues that the Examiner does not assert that the claimed invention is a law of nature or a natural phenomena, Examiner submits that the claimed invention is an abstract idea and not arguing that it's laws of nature or natural phenomena. The claimed invention is an abstract idea because a table can be created in someone's head or on a piece of paper.

iii. Third, the claimed invention should provide a practical application. The claimed invention should either be a physical transformation or should produce a useful, concrete and tangible result. The claimed invention does not produce a useful result, because it's not specific, substantial and has credible utility. The claimed invention recites a method of developing an orthodontic treatment and entering crowding/spacing , curve of spee spacing, midline spacing, incisor position data, which are not clear in the claim as explained above, and create a first and second tables. Examiner respectfully submits that creating a table is not an actual treatment and the implementation of the treatment is not in the claims. The claimed invention does not produce a tangible result, because it's an abstract idea as explained above. Applicant argues that the Federal Circuit in *State Street Bank & Trust Co. v. Signature Financial Group Inc.*, 149 F. 3d 1368,

47 USPQ2d 1596 (Fed. Cir. 1998) acknowledges that, "the mere fact that a claimed invention involves inputting numbers, calculating numbers, outputting numbers and storing numbers, in and of itself, would not render it nonstatutory." Examiner agrees that the claimed invention teaches inputting numbers and calculating numbers, but the claimed invention does not teach outputting or storing those numbers. Therefore this acknowledgement would not be suitable for this claimed invention.

iv. Fourth, the claimed invention should wholly preempt all substantial applications of a judicial exception.

All four steps must be applied to each and every claim to form a complete analysis.

C. In response to Applicant's argument about Andreiko does not teach "entering first crowding/spacing data in first and second tables, wherein the first table relates to cuspid to midline regions of a patient's jaw, wherein the second table relates to second molar to midline regions of the patient's jaw, and wherein the first crowding/spacing data relates to the right and left cuspid to midline regions of the patient's jaw; entering second crowding/spacing data in the second table but not the first table, wherein the second crowding/spacing data relates to bicuspid regions of the patient's jaw; entering third crowding/spacing data in the second table but not the first table, wherein the third crowding/spacing data relates to molar regions of the patient's jaw; entering curve of Spee spacing data in the first and second tables, wherein the curve of Spee spacing data relates to

space required to correct a curve of Spee of the patient's jaw entering midline spacing data in the first and second tables, wherein the midline spacing data relates to space created and required to move a midline of teeth in the patient's jaw; entering incisor position data in the first and second tables, wherein the incisor position data relates to space required to correct positions of incisors in the patient's jaw; creating for the first table but not the second table a first total by summing the first crowding/spacing data, the curve of spee spacing data, the midline spacing data, and the incisor position data; and, creating for the second table but not the first table a second total by summing the first crowding/spacing data, the second crowding/spacing data, the third crowding/spacing data, the curve of Spee spacing data, the midline spacing data, and the incisor position data.", Examiner respectfully submits that Andreiko teaches entering crowding/spacing, curve of Spee spacing, midline spacing and incisor position data as explained in col. 13, lines 53-68, and also, in figure 4 and col. 37, lines 5-18, Andreiko teaches "inputting the data" and "grid lines". Examiner considers that "grid lines" represent a table, since it has rows and columns. As can be seen in fig. 4 that the crowding/spacing, curve of Spee spacing, midline spacing and incisor position data is disclosed by Andreiko by letters and coordinates. Since claim 1 is not clear what size or kind of table is to be used to enter data, Adreiko teaches the tables recited by claims 1-44.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

7. A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dilek B. Cobanoglu whose telephone number is 571-272-8295. The examiner can normally be reached on 8-4:30.


9. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Thomas can be reached on 571-272-6776. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3626

10. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DBC

DBC
Art Unit 3626
12/01/2006


Primary C. LUKE GILLIGAN
PATENT EXAMINER